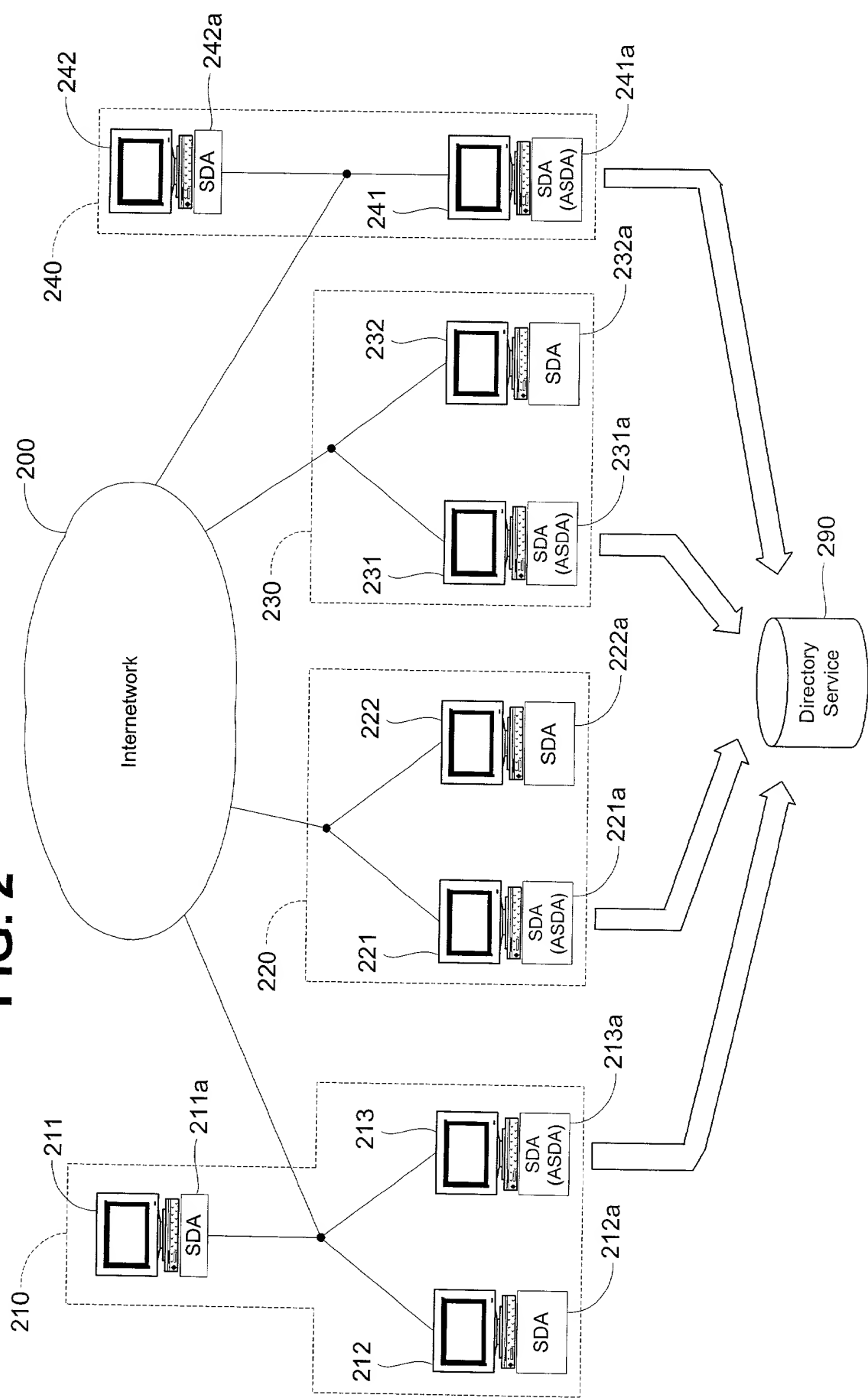
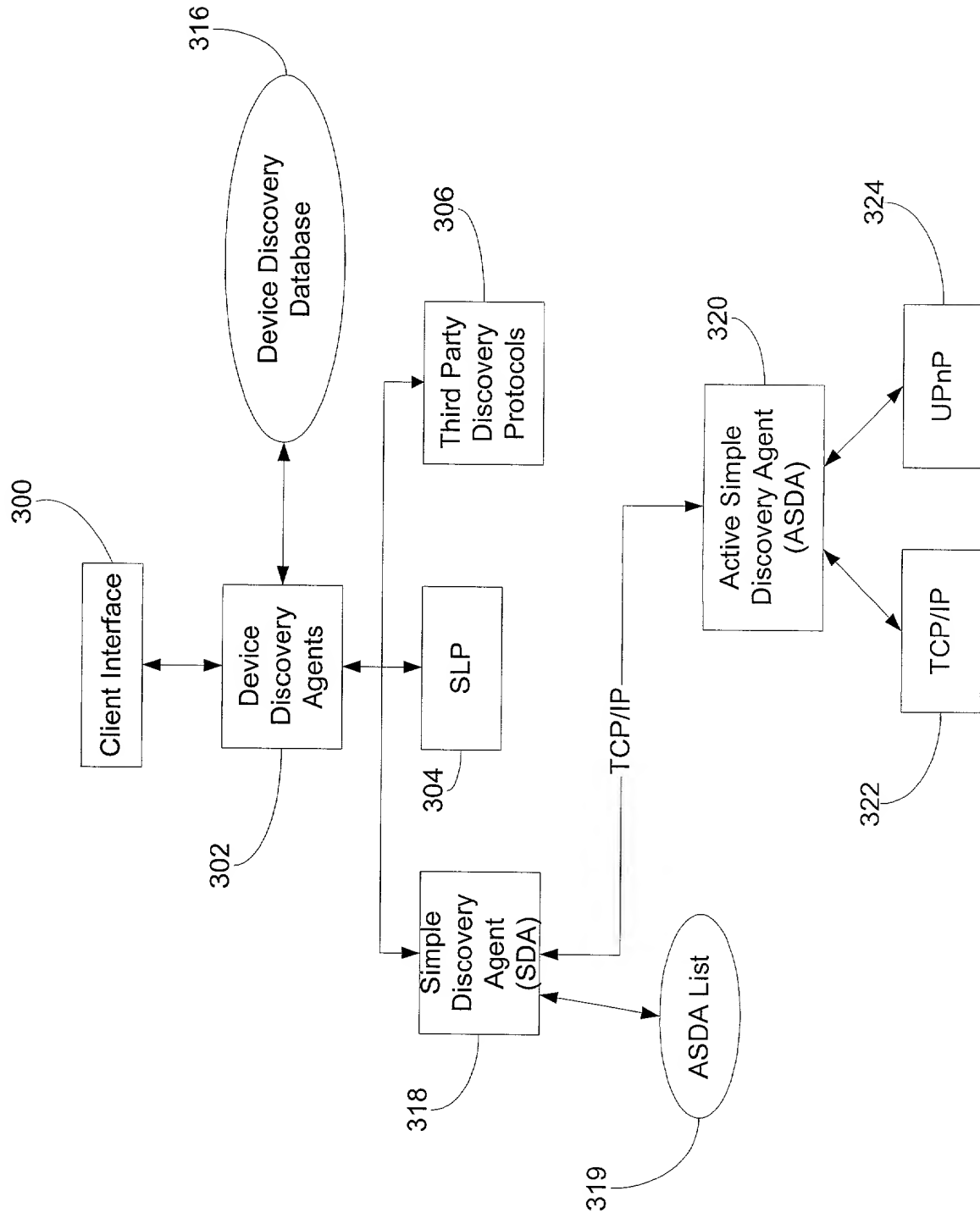


**FIG. 1**

FIG. 2



**FIG. 3**



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```
<SDA List>
<SDA >
  <Subnet> 3.2.0.0 </Subnet>
  <IPAddress> 3.2.5.6 </IPAddress>
</SDA >

<SDA >
  <Subnet> 3.3.0.0 </Subnet>
  <IPAddress> 3.3.2.5 </IPAddress>
</SDA >

<SDA >
  <Subnet> 3.4.0.0 </Subnet>
  <IPAddress> 3.4.5.3 </IPAddress>
</SDA >
</SDA List>
```

**FIG. 4**

US 2007/0143000 A1  
Leydig Voit & Mayer Ltd  
Attorney Docket 212516  
Chicago, IL 60601-6780  
Telephone (312) 616-5600

Message Types

| Message              | Message Source    | Message Destination        | Message Type |
|----------------------|-------------------|----------------------------|--------------|
| 501<br>WHO_IS_ASDA   | Resource          | Subnet having the resource | Multicast    |
|                      | ASDA              | Adjacent subnets           | Multicast    |
| 502<br>ASDA_AD       | ASDA              | Subnet having the ASDA     | Multicast    |
|                      | Neighbor ASDA     | Originating ASDA           | Unicast      |
| 503<br>SDA_WILLING   | SDA               | Subnet                     | Multicast    |
| 504<br>SEARCH_DEVICE | Resource          | ASDA                       | Unicast      |
|                      | ASDA              | Neighbor ASDA              | Unicast      |
|                      | Resource          | Directory Service          | Unicast      |
| 505<br>FOUND_DEVICE  | ASDA              | Resource                   | Unicast      |
|                      | Directory Service | Resource                   | Unicast      |

FIG. 5a

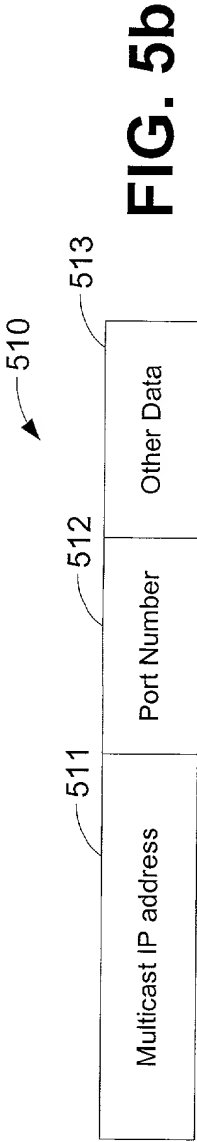


FIG. 5b

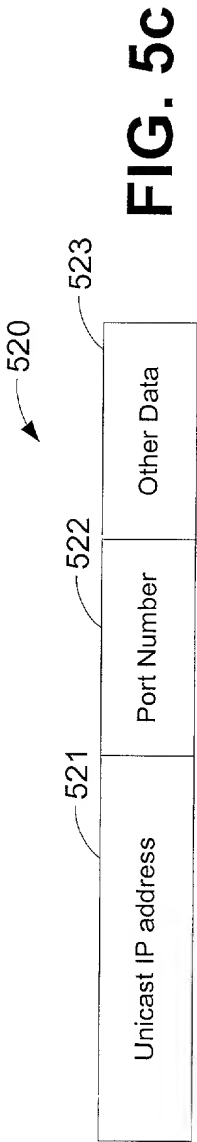


FIG. 5c

**FIG. 5d**

| Administrative Messages |  |      |           |                 |              |                  |                                       |               |               |                |               |              |               |               |               |
|-------------------------|--|------|-----------|-----------------|--------------|------------------|---------------------------------------|---------------|---------------|----------------|---------------|--------------|---------------|---------------|---------------|
| 551                     | <table><tr><th>Name</th><th>Parameter</th></tr><tr><td>GET_VERSION REQ</td><td>(GUID, ReID)</td></tr><tr><td>GET_VERSION RESP</td><td>(GUID, ReID, INT Major,<br/>INT Minor)</td></tr><tr><td>HEARTBEAT REQ</td><td>(GUID, ReqID)</td></tr><tr><td>HEARTBEAT RESP</td><td>(GUID, ReqID)</td></tr><tr><td>SHUTDOWN REQ</td><td>(GUID, ReqID)</td></tr><tr><td>SHUTDOWN RESP</td><td>(GUID, ReqID)</td></tr></table> | Name | Parameter | GET_VERSION REQ | (GUID, ReID) | GET_VERSION RESP | (GUID, ReID, INT Major,<br>INT Minor) | HEARTBEAT REQ | (GUID, ReqID) | HEARTBEAT RESP | (GUID, ReqID) | SHUTDOWN REQ | (GUID, ReqID) | SHUTDOWN RESP | (GUID, ReqID) |
| Name                    | Parameter  |      |           |                 |              |                  |                                       |               |               |                |               |              |               |               |               |
| GET_VERSION REQ         | (GUID, ReID)   |      |           |                 |              |                  |                                       |               |               |                |               |              |               |               |               |
| GET_VERSION RESP        | (GUID, ReID, INT Major,<br>INT Minor)  |      |           |                 |              |                  |                                       |               |               |                |               |              |               |               |               |
| HEARTBEAT REQ           | (GUID, ReqID)  |      |           |                 |              |                  |                                       |               |               |                |               |              |               |               |               |
| HEARTBEAT RESP          | (GUID, ReqID)  |      |           |                 |              |                  |                                       |               |               |                |               |              |               |               |               |
| SHUTDOWN REQ            | (GUID, ReqID)  |      |           |                 |              |                  |                                       |               |               |                |               |              |               |               |               |
| SHUTDOWN RESP           | (GUID, ReqID)  |      |           |                 |              |                  |                                       |               |               |                |               |              |               |               |               |

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| Functional Message List        |  |
|--------------------------------|--|
| Name                           | Parameters   |
| 572 REGISTER NOTIFICATION REQ  | (GUID, ReID, GUID NotificationID, BOOL bSecure, STRING SubnetScope)  |
| 574 REGISTER NOTIFICATION RESP | (GUID, ReID, INT Mode, ErrorEnum ErrorCode, STRING ErrorDescription) |
| 575 PROGRESS REQ               | (GUID, ReqID, INT ProgressPercentage)                                |
| 576 PROGRESS RESP              | (GUID, ReID, INT Mode, ErrorEnum ErrorCode, STRING ErrorDescription) |
| 577 SEARCH DEVICE REQ          | GUID, ReID, GUID SearchID, BOOL bSecure, STRING SubnetScope          |
| 578 SEARCH DEVICE RESP         | (GUID, ReID, INT Mode, ErrorEnum ErrorCode, STRING ErrorDescription) |
| 579 REMOVE REQUEST REQ         | (GUID, ReID, GUID NotificationID)                                    |
| 580 REMOVE REQUEST RESP        | (GUID, ReID, INT Mode, ErrorEnum ErrorCode, STRING ErrorDescription) |
| 581 NEW DEVICE REQ             | (GUID, ReID, GUID NotificationID, NewDeviceStruct Device)            |
| 582 NEW DEVICE RESP            | (GUID ReqID, ErrorEnum ErrorCode, STRING ErrorDescription)           |
| 583 FOUND DEVICE REQ           | (GUID ReqID, NewDeviceStruct Device)                                 |
| 584 FOUND DEVICE RESP          | (GUID ReqID, ErrorEnum ErrorCode, STRING ErrorDescription)           |

FIG. 5e

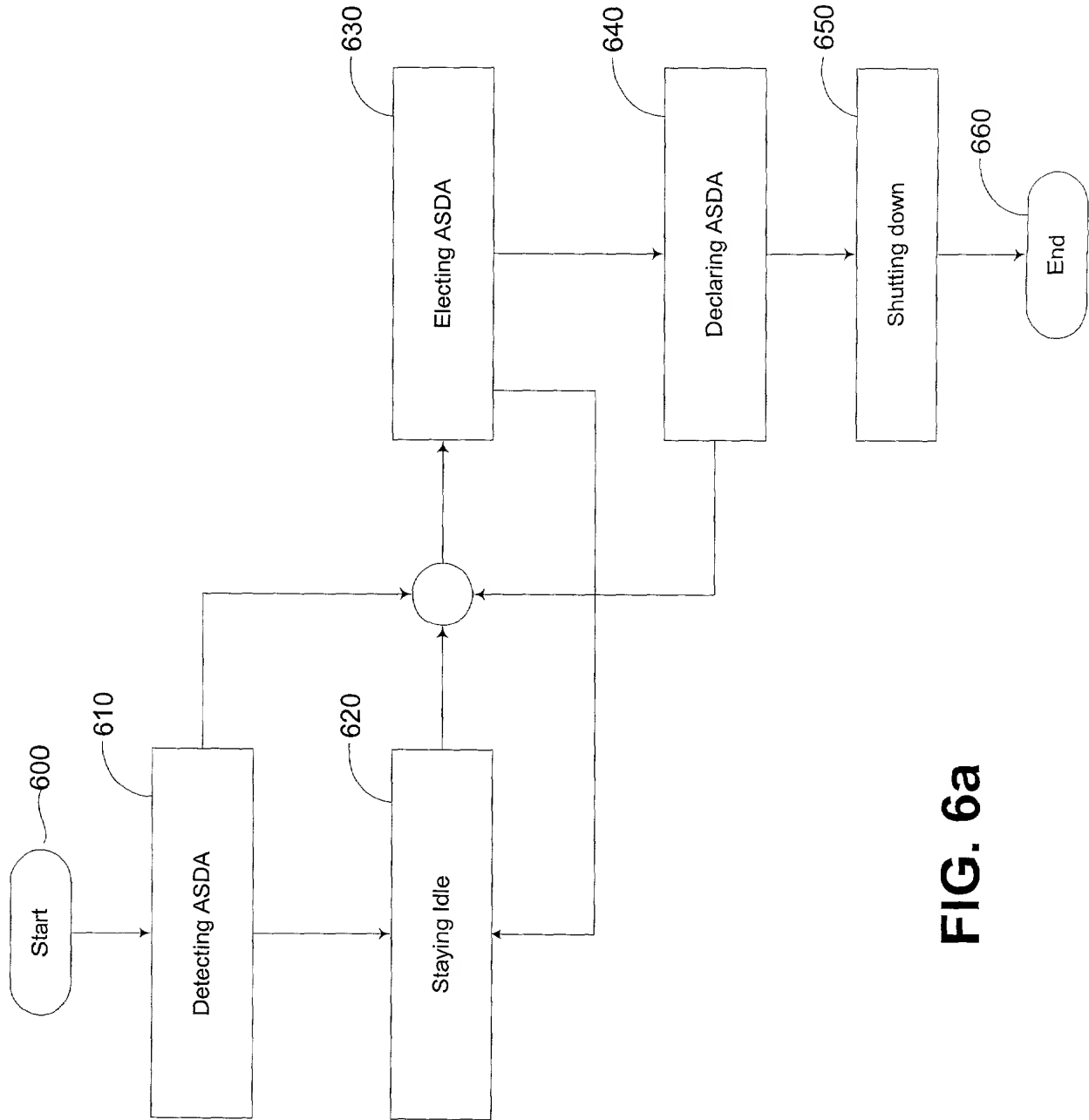


FIG. 6a



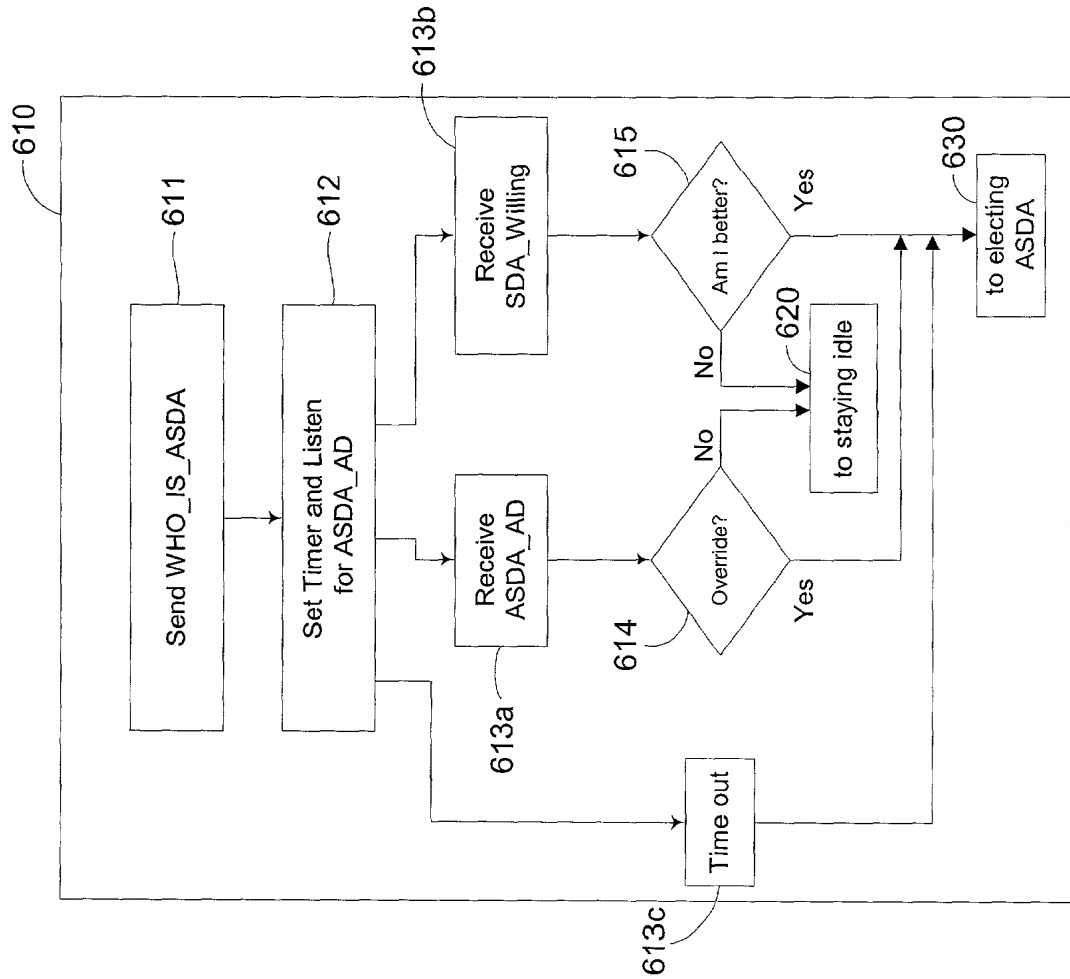


FIG. 6b

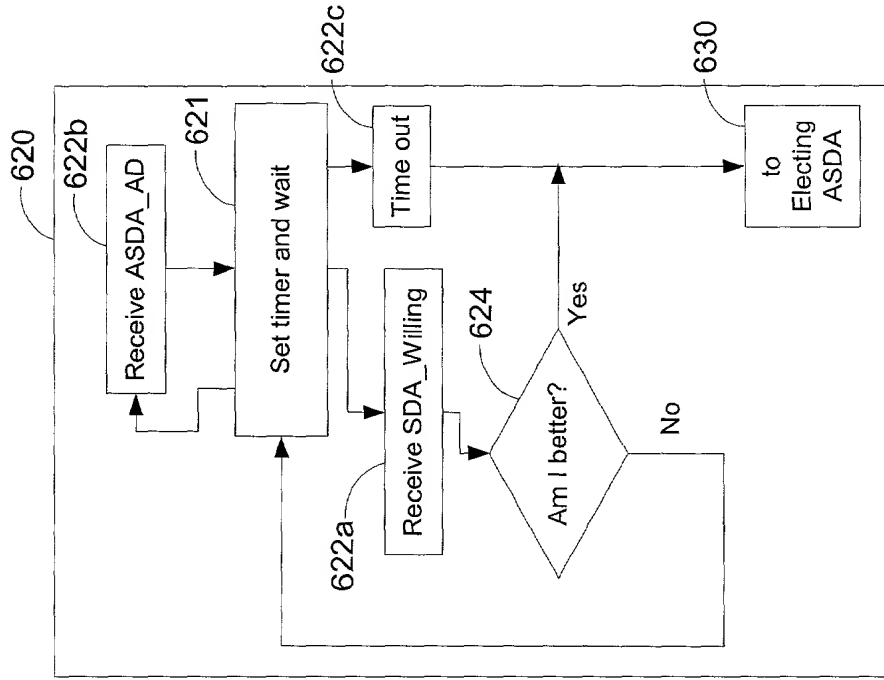
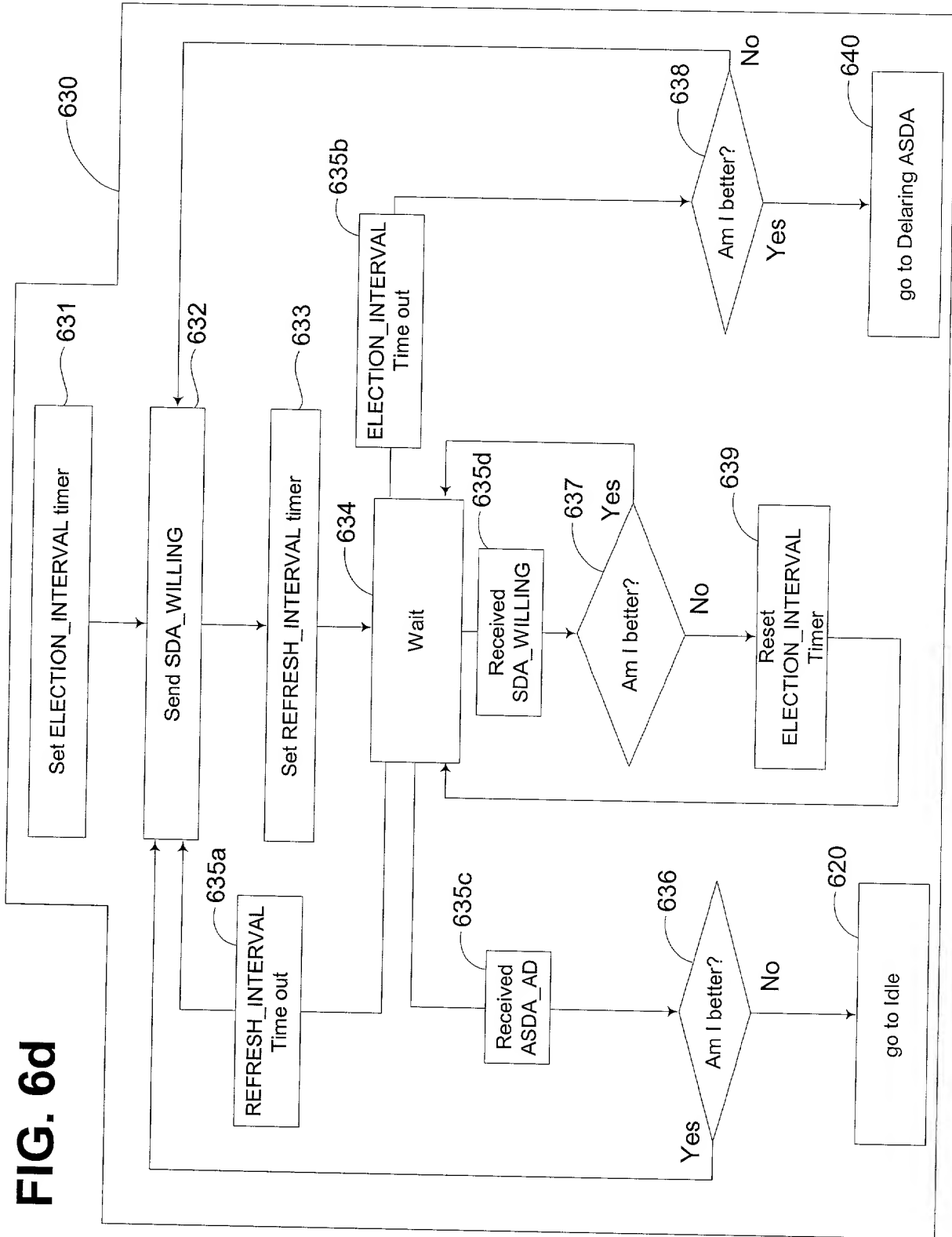
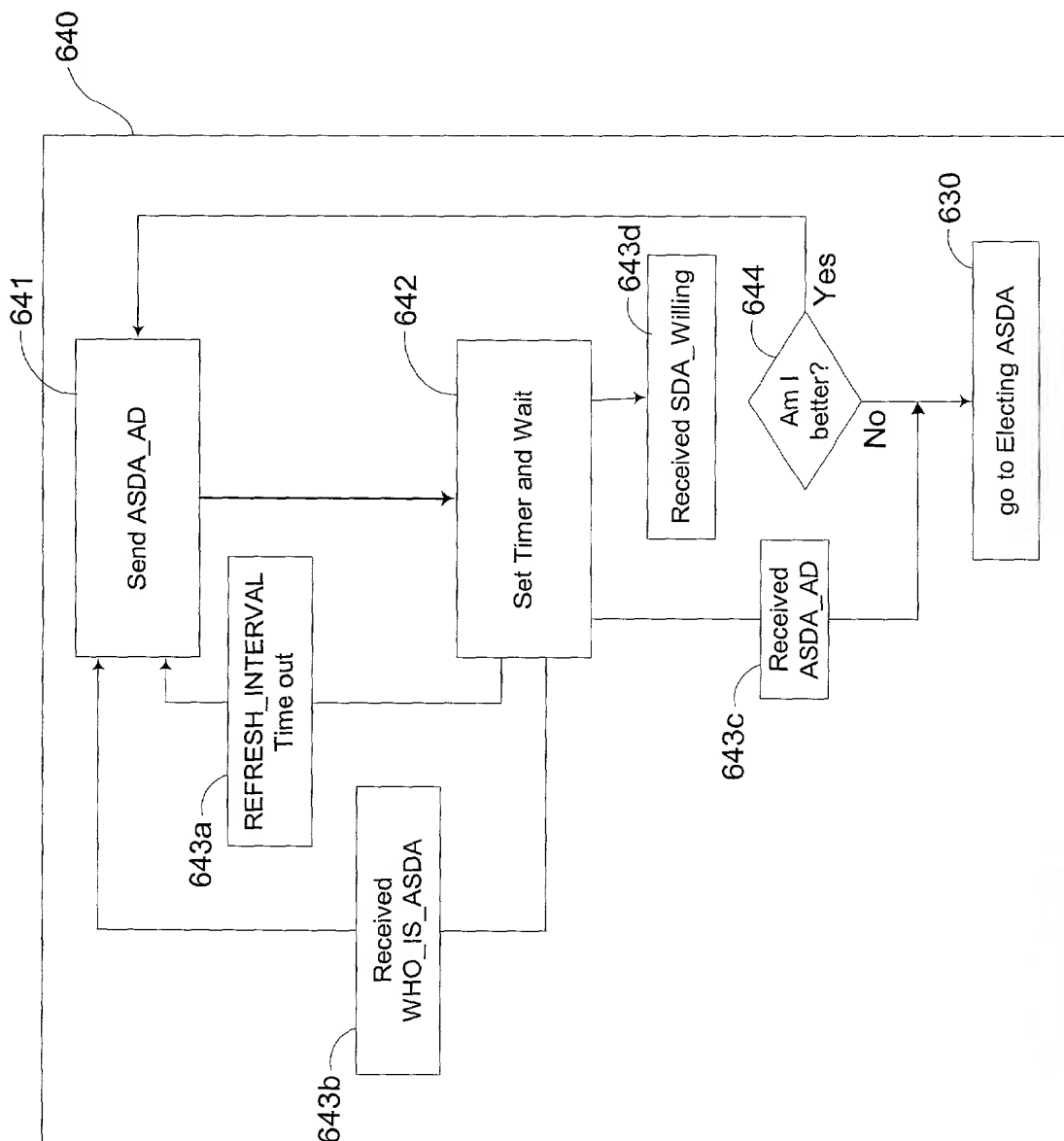


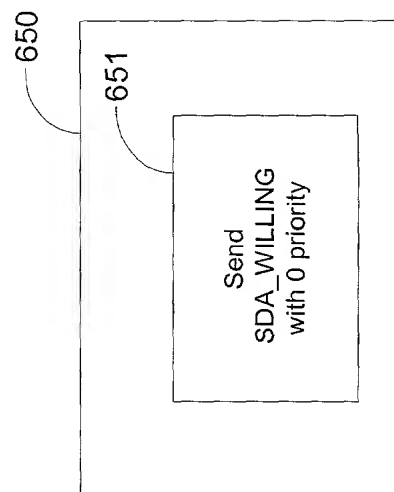
FIG. 6c

FIG. 6d





**FIG. 6e**



**FIG. 6f**

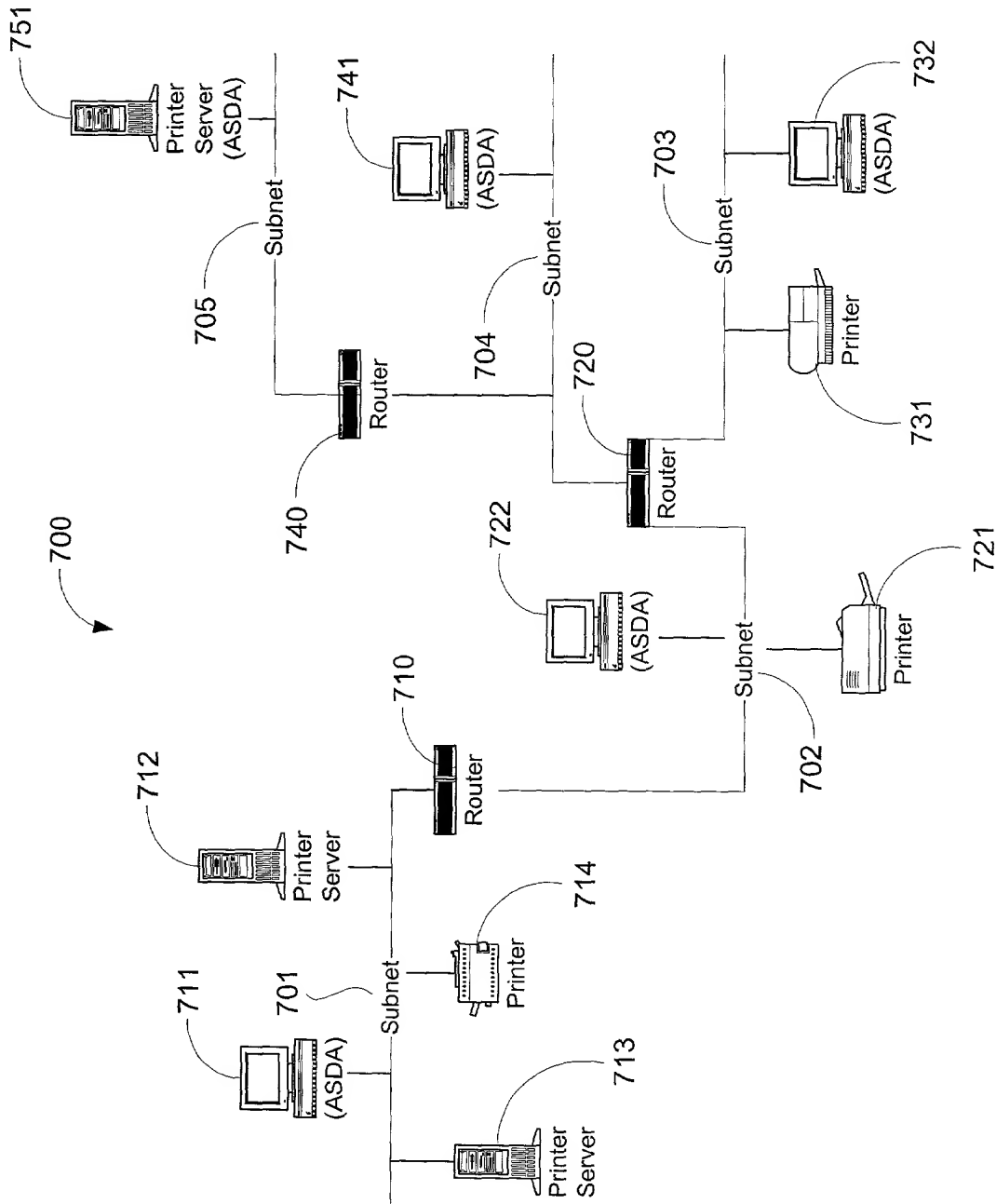


FIG. 7

|     | Operation    | Message       | Message from           | Message to                |
|-----|--------------|---------------|------------------------|---------------------------|
| 801 | Multicasting | WHO_IS_ASDA   | Printer Server 712     | Subnet 701                |
| 802 | Multicasting | ASDA_AD       | ASDA 711               | Subnet 701                |
| 803 | Unicasting   | SEARCH_DEVICE | Printer Server 712     | ASDA 711                  |
| 804 | Searching    |               | ASDA 711               |                           |
| 805 | Unicasting   | FOUND_DEVICE  | ASDA 711               | Printer Server 712        |
| 806 | Multicasting | WHO_IS_ASDA   | ASDA 711               | Subnet 702                |
| 807 | Unicasting   | ASDA_AD       | ASDA 722               | ASDA 711                  |
| 808 | Unicasting   | SEARCH_DEVICE | ASDA 711               | ASDA 722                  |
| 809 | Searching    |               | ASDA 722               |                           |
| 810 | Unicasting   | FOUND_DEVICE  | ASDA 722               | Printer Server 712        |
| 811 | Multicasting | WHO_IS_ASDA   | ASDA 722               | Subnets 701, 703, and 704 |
| 812 | Unicasting   | ASDA_AD       | ASDA 711, 732, and 741 | ASDA 722                  |
| 813 | Unicasting   | SEARCH_DEVICE | ASDA 722               | ASDA 732 and 741          |
| 814 | Searching    |               | ASDA 732 and 741       |                           |
| 815 | Unicasting   | FOUND_DEVICE  | ASDA 732               | Printer Server 712        |
| 816 | Multicasting | WHO_IS_ASDA   | ASDA 732               | Subnets 702 and 704       |
| 817 | Unicasting   | ASDA_AD       | ASDA 722 and 741       | ASDA 732                  |
| 818 | Unicasting   | SEARCH_DEVICE | ASDA 732               | ASDA 741                  |
| 819 | Searching    |               | ASDA 741               |                           |
| 820 | Multicasting | WHO_IS_ASDA   | ASDA 741               | Subnets 702, 703, 705     |
| 821 | Unicasting   | ASDA_AD       | ASDA 722, 732 and 751  | ASDA 741                  |
| 822 | Unicasting   | SEARCH_DEVICE | ASDA 741               | ASDA 751                  |
| 823 | Searching    |               | ASDA 751               |                           |
| 824 | Multicasting | WHO_IS_ASDA   | ASDA 751               | Subnet 704                |
| 825 | Unicasting   | ASDA_AD       | ASDA 741               | ASDA 751                  |

**FIG. 8**